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1.0 GENERAL INFORMATION

The purpose of this document is to provide guidance to Project Managers, Functional Groups and Activity Owners on how to use reports and layouts generated by P6.

The reports in this document are available on the P6 web site Reports page or can be generated by request from the SSC. This document identifies the reports used for the project baseline process and the reports used to monitor the progress on a project.

Each report identified will have an overview description, typical use, a One-Pager with sample data and where it is generated in P6.

It is expected that these reports will evolve as the needs of reporting change. Please discuss any comments with either SSC or Admin staff.

2.0 REPORT INFORMATION

This section summarizes the description and typical use for baselining and monitoring reports.

2.1 BASELINING REPORTS

There are three reports used to baseline a project schedule. For information on how a schedule is baselined, see PD-10-01 Schedule Creation and Baseline Process.

Click the link name to go to the sample report.

1. MnDOT Baseline Gantt Chart

   Description
   The Gantt Chart contains all of the activities in a schedule grouped by Work Package and Work Break Down Structure (WBS)).

   Typical Use
   This layout is a good tool to review:
   - Work Packages in a design project schedule
   - Activities included in each work package
   - Anticipated activity original duration
   - Owner and Functional Group assignments

2. MnDOT Baseline Relationships Report

   Description
   The Relationship Report shows all of the predecessor and successor logic for each activity in a schedule. These relationships drive the start of a specific activity.

   Typical Use
   This report may be used with the Gantt Chart will help identify changes needed to correct logic to better represent the anticipated project work flow.
3. **MnDOT Role Report**

**Description**
The role report is used to evaluate the job class (role) of the people performing work on an activity and adjust the role hours. This report is grouped by similar role so you can see all of the activities performed by a specific role on a project.

**Typical Use**
Assign the appropriate roles and role hours to activities:
- Is the role assigned correct to complete an activity?
- Do roles need to be added to an activity?
- Are the estimated budgeted units (hours) accurate to complete the activity?
- What unused roles need to be removed?

### 2.2 SCHEDULE MONITORING REPORTS

These reports are posted to the P6 Reports webpage. The Report Generation Frequency specifies the timelines for report generation.

1. **Program Review Report**

**Description**
These reports are District-specific report including all of the schedules in P6 that represent Planned or Programmed projects. The reports include PPMS header and P6 activity data. Listed activities may vary by district request.

**Typical Use**
Program Review reports are used at project management and functional group coordination meetings focused on delivering projects on time.

2. **Functional Group Report by Owner**

**Description**
This report contains all activities coded to a specific Functional Group. The activities are grouped by Functional Group and activity owner.

**Typical Use**
Functional Group can review all activities in the state or district within one report. Grouping by Owner will aid in workload planning for functional group teams as well as individual users.

3. **Functional Group Report by Letting Date**

**Description**
This report contains all activities coded to a specific Functional Group. The activities are grouped by Functional Group, let date, and SP.
Typical Use
Functional Group can review all activities in one report. Grouping projects by let date and SP allows this report to supplement Program Review and aids Functional Groups in determining if their activities are on a project (or missing).

4. Functional Group Summary Report

Description
This report shows all of the activities planned to be completed by a specific role. The hours related to each role are distributed by month in the spreadsheet.

Typical Use
This report allows Functional Groups to determine the amount of hours planned for an individual role in any upcoming month. Hours are summarized by individual roles and by functional group to help determine if a role or functional group is over-allocated or underutilized in any given month.

5. MnDOT - 3 Month LA; TF < 60 D

Description
This layout report lists the activities in a schedule grouped by Work Break Down Structure (Project Deliverables) with less than 60 days total float and can be started in the next three months.

Typical Use
Review upcoming activities on an individual project.

6. MnDOT - Gantt Chart Layout

Description
The Gantt Chart contains all of the activities in a specific project grouped by Work Break Down Structure (Project Deliverables). Activities on the critical path have red bars on the Gantt chart.

Typical Use
This layout is a good tool to review:
- Work Packages in a design project schedule
- Activities included in each work package
- Anticipated Activity Original and Remaining Duration and Physical Percent Complete
- Owner and Functional Group assignments

7. Schedule Review: Relationships by WBS

Description
The Relationship Report shows the predecessor and successor logic for each activity in a schedule. These relationships drive the start of a specific activity.

Typical Use
Review what activity is driving the start of another activity (what activity needs to be completed in order to start the next activity).

This report may be used with the Gantt Chart will help identify changes needed to correct logic to better represent the anticipated project work flow.
8. **All Activities By Total Float**

**Description**
This layout report shows each of the float paths associated with a group of activities within a schedule.

**Typical Use**
Review Activity float paths to understand critical paths and secondary paths.

This report aids in design of recovery schedules. The critical float path is usually near the top (note activities with 7-day calendars may appear first if project is in negative float). Each of the float paths can be used to understand how groups of activities work together.

9. **All Activities by Early Start**

**Description**
This layout report contains all activities in a schedule sorted in chronological order.

**Typical Use**
Review upcoming work in chronological order (what is coming next). Note: consecutive activities may be on unrelated logic paths. No logic assumptions should be made based on this layout.

10. **PPMS Header Current**

**Description**
This is a PPMS-generated report that is linked to the Project Management spreadsheet. It contains the project description, location, limits, estimated costs, development schedule, and letting dates for Trunk Highway, State Aid, Transit, and Rail and Intelligent Transportation Systems projects.

**Typical Use**
Verify information – let date, funding, etc

11. **Owner Reports - All Activities Spreadsheet**

**Description**
This report contains schedule activities for active design schedules and multiple P6 activity data fields in a table; sortable and filterable for easy analysis.

**Typical Use**
Analysis of any variety of project activity information by the District, Project Manager, Functional Group, or activity owner.
3.0 BASELINING REPORT ONE PAGERS

This section contains One-Pagers providing information on how to read project reports. The audience is Project Managers, Functional Group Managers, and Activity Owners. Each report presented below shows the primary purpose, column fields, and common uses and key features.

3.1 MNODOT-BASELINE GANTT CHART LAYOUT

Gantt Chart Project Review: (numbering correlates to red values on schedule).

The primary use of the project Gantt chart is for review of a specific project, often by a project manager or functional group. The Activities are grouped by Work Breakdown Structure (WBS).

P6 Activity Layout: MnDOT – Baseline Gantt Chart Layout

Schedule Information:

1. Highest level of WBS within a project. Typically detailing work type.
2. Lowest level of WBS usually correlating to a deliverable.
3. Activities under WBS to produce deliverable.

Gantt Chart Project Review

4. Are the correct work packages in the schedule (look at lowest level of WBS for work package and deliverables)?
5. Are the needed activities and deliverables in the schedule?
6. Is the duration, in days, correct for the activities you are responsible for?
7. Review and complete any missing owners.
3.2 MNDOT-BASELINE RELATIONSHIPS REPORT

Logic Report: (Numbering correlates to red values on schedule)

The Project relationship report contains the logic between activities in a schedule. The Predecessor and Successor logic drives the start or finish of an Activity and Float calculations.

P6 Report Layout: MnDOT Baseline Review: Relationship by WBS

Schedule Information:

1. Lowest Level of WBS Activity is under.
2. Activity the logic is detailed for.
3. Predecessor, Activity to be completed before the Activity being detailed.
4. Successor, Activity occurring after completion of the Activity being detailed.
5. Type of logic; FS = Finish Start, SS = Start-Start, FF = Finish-Finish.
6. Owner of Predecessor or Successor.
3.3 MNDOT-ROLE REPORT

Role Review (numbering correlates to red values on schedule).

This report is for workload planning. The report is showing all of the planned hours on a Project to be completed by a Role for the listed Activities. This work is summarized by Role Group (branch of role tree).

P6 Resource Assignment Layout: MnDOT - Baseline Role Review by Role

Schedule Information:

1. Role – Person classification to perform task
2. Activity - Task to be completed.
3. Role Budgeted Units –hours to perform task.
4. Summary of Budgeted Units –Rolled up hours for single Role across multiple Activities.
4.0 SCHEDULE MONITORING REPORT ONE PAGERS

The following information is further guidance, protocols, and reference materials for creating and baselining a schedule.

4.1 PROGRAM REVIEW REPORT

Program Review Report: (numbering correlates to red values on schedule)

P6 Report Layout: *Generated from PPMS header and variable Program Review Reports depending on district*

1. The PPMS Header report contains the data stored in PPMS – Let Date, funding, project description, limits, and more.

2. The schedule data is pulled from P6 and includes progress updates and resulting start and finish dates. The Activities listed will differ by District and will be indicated in the report title. The three reports indicate the report contains “All Activities”, “Activities on Critical Path”, or all Activities on “Project with Negative Float".
4.2 FUNCTIONAL GROUP REPORT BY OWNER

Schedule Update and Accuracy Review: (numbering correlates to red values on schedule).

P6 Activity Layout: 6-MnDOT – Funct Group Activity - Owner

1. Data Date: The “time now” date that remaining durations and float are calculated from; may differ if float limit applied to project. This correlates with the Vertical Blue Line in the Gantt Chart.

2. Activity Riding the Data Date: Early Start= Data Date; Predecessors are complete. Schedule indicates activity can be started.

3. Out of sequence work: Gap in activity bar
   - Activity was started before all Predecessors were complete, the predecessor being finished is creating the gap.
   - Review logic with SSC scheduler and Project Manager, revise if needed

4. Activity not being updated: Started September 02, 2014. Started activities must be updated every two weeks. If no progress was made, contact your Project Manager and SSC scheduler to work through possible impacts.

Audit of Missing work:

Look for:
- Activities coded to the wrong functional group
- Activities coded to the wrong owner
- Activities missing from a report
- Activities missing from a schedule

If there are errors or missing data is encountered, see SSC scheduler. Accurate Activity data produces accurate schedules and reports.
4.3 FUNCTIONAL GROUP REPORT BY LETTING DATE

Schedule Update and Accuracy Review:
(Numbering correlates to red values on schedule).

**P6 Activity Layout: 5-MnDOT –Funct Group Activity – Let Date**

1. Data Date: The "time now" date that remaining durations and float are calculated from; may differ if float limit applied to project. This correlates with the vertical blue line in the Gantt Chart.

2. Activity Riding the Data Date: Early Start= Data Date; Predecessors are complete. Schedule indicates activity can be started.

3. Out of sequence work: Gap in activity bar
   • Activity was started before all Predecessors were complete, predecessor creating gap.
   • Review logic with SSC scheduler and Project Manager, revise if needed.

4. Activity not being updated: Started September 02, 2014. Started activities must be updated every two weeks. If no progress was made, contact your Project Manager and SSC scheduler to work through possible impacts.

Audit of Missing work:

Look for:
   • Activities coded to the wrong functional group
   • Activities coded to the wrong owner
   • Activities missing from a report
   • Activities missing from a schedule

If there are errors or missing data is encountered, see SSC scheduler. Accurate activity data produces accurate schedules and reports.
4.4 FUNCTIONAL GROUP ROLE SUMMARY REPORT

Role Budgeted Units by Month (numbering correlates to red values on schedule).

P6 Resource Assignment Layout: Multi Project - Role w Role Spreadsheet

This report is for workload planning showing all of the work assigned to a role and the months the work is planned to occur in. This work is summarized by Role Group (branch of role tree).

1. Role – Person classification to perform task (Add info about summary).
2. Activity - Task to be completed
3. Remaining Role Hours – remaining hours to perform task.
4. Planned Role Hours by Month – hours distributed to calendar months based on activity early start and remaining duration.
4.5 MNDOT-3 MONTH LA; T F<60 D

Three Month Look-ahead: (numbering correlates to red values on schedule).

P6 Activity Layout: 2-MnDOT - 3 Month LA; TF < 60 D
Project Management Report (link to each project report in District-Reports.xlsx sortable table)

This is a summary of upcoming work grouped by WBS. This is a good report for a project manager to identify what work is occurring or upcoming on a specific Project. Activities included have less than 60 days total float and can be started in the next three months

Schedule Information:
1. Data Date: The “time now” date that remaining durations and float are calculated from; may be in future if float limit applied to project.
2. Activities
3. Early Start: Within 3 months of Data Date
4.6 MNDOT GANTT CHART LAYOUT

Gantt Chart Project Review: (numbering correlates to red values on schedule).

P6 Activity Layout: 1-MnDOT - Gantt Chart Layout
Project Management Report (link to each project report in District-Reports.xlsx sortable table)

The primary use of the project Gantt chart is for review of a specific project, often by a project manager. The Activities are grouped by Work Breakdown Structure (WBS).

Schedule Information:
Activity Bars show earliest start date for activity based on schedule logic

1. Highest level of WBS within a project detailing work type.
2. Lowest level of WBS usually correlating to a deliverable.
3. Activities under WBS deliverables.
4. Diamond shape indicates Milestone.
5. Green Activity Bar indicates remaining work.
6. Blue Activity Bar indicates completed work.
7. Red Bar indicates Activity is on longest path (Critical)
4.7 **MNDOT ACTIVITIES RELATIONSHIP REPORT: ALL ACTIVITIES BY PROJECT**

**Logic Report:**
(Numbering correlates to red values on schedule)

**P6 Report Layout: MnDOT Activity Relationship Report: All Activities by Project**
Project Management Report (link to each project report in District-Reports.xlsx sortable table)

The Project relationship report contains the logic between activities in a schedule. The Predecessor and Successor logic drives the start or finish of an Activity and the Float calculations.

**Schedule Information:**

1. Activity the logic is detailed for.
2. Predecessor - Activity driving the Activity being detailed.
3. Successor - Activity being driven by the Activity being detailed.
4. Type of logic; FS = Finish Start, SS = Start-Start, FF = Finish-Finish.
5. Estimated percent complete of Predecessor or Successor activities.
6. Anticipated or actual Early Start of the Predecessor or Successor activities.
7. Total Float of Activity being detailed.
4.8  ALL ACTIVITIES BY TOTAL FLOAT

Float Path Review
(Numbering correlates to red values on schedule).

P6 Activity Layout: 3-MnDOT - Total Float Layout
Project Management Report (link to each project report in District-Reports.xlsx sortable table)

The Total Float Layout groups Activities by the Activity Total Float and Start Date. This typically groups activities that logic connects together. Looking at each float path can aid in identifying activities that can be crashed to advance project delivery.

Schedule Information:

1. Float Path 1 – Activities in this float path are on the critical/longest path (red).

2. Float Path 2 – this is a secondary logic path through the schedule.

Analysis of float paths
Float path analysis will aid in identify activities that can be accelerated to deliver a project sooner than the schedule shows. In the example above the two float paths are shown. Seeing both float paths helps identify what duration can be reduced from Float Path 1 before Float Path 2 becomes critical and on the longest path. In this example 5 days can be removed from Float Path 1 before Float Path 2 becomes part of the longest paths. To crash the project more than 5 days, both float paths would require reduced Durations.

N:\OPMTS Project Management\Project Management Unit\P6 Implementation\Documents\Process Documents\Released\P6-00-11_Reports_Layouts User Guide_20141212.docx
4.9 ALL ACTIVITIES BY EARLY START

Schedule Activities sorted by Early Start

P6 Activity Layout: 4-MnDOT - All Activities by Early Start

Project Management Report (link to each project report in District-Reports.xlsx sortable table)

This report contains all activities in the project schedule sorted by early start. The common use for this report is to identify who should be working on your project next.

Note: This does not represent the order the schedule logic requires work to be complete, just when the earliest potential start can occur.
4.10 PPMS HEADER CURRENT

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<th>District List</th>
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SEE P6 REPORTS FOR POSSIBLE SCHEDULE

PPMS Header

Source PPMS – see PPMS Coordinator

This report contains project level data stored in PPMS. Common uses of this report is to determine the description, location, limits, estimated costs, development schedule, and letting dates for Trunk Highways, State Aid, Transit, and Rail and Intelligent Transportation Systems projects.
4.11 OWNER REPORTS – ALL ACTIVITIES SPREADSHEET

Owners Report

P6 Activity Layout: MnDOT All Activities Spreadsheet Layout

The All Activities Spreadsheet contains all Activities that are on Active Projects in MnDOT’s P6 Enterprise System and contains the primary activity level data used by P6 for Owners, Functional Groups, and Project Managers.

The All Activities Spreadsheet is in a table format that can be easily grouped or sorted to extract specific information. This can be used to research project activities including what work is planned for a specific functional group or Owner, or to provide Activity Audits to improve the quality of schedules.

Activity Audits using the All Activities Spreadsheet can help identifying:

- Activities coded to the wrong functional group
- Activities coded to the wrong owner
- Activities missing from a report
- Activities missing from a schedule

If there are errors or missing data is encountered, see SSC scheduler. Accurate Activity data produces accurate schedules and reports.
5.0 SCOREBOARD LAYOUTS AND FILTERS

P6 is used to generate scoreboard information for the Project Management Battle. See Coding Project in P6 for PM Battle Scoreboard for additional information.

Scoreboard Filters are listed below. Filters use the most recent data date when pulling data for the scoreboard.

1.0 Scoping Document
   a. Scoping Document Complete Milestone or PPMS activity 1003 Project Scoping complete
   b. P6 Project Status code: active projects
   c. MnDOT Project Status code: planned or programmed
   d. Schedule: Design, Bridge or Scoping
   e. MnDOT Completion Type code: MnDOT Let
   f. A must finish by date that is after the last letting period

2.0 Signed and Approved Schedules
   a. Project Status code: active projects
   b. MnDOT Project Status code: planned or programmed
   c. Schedule: Design or bridge
   d. MnDOT Completion Type code: MnDOT Let
   e. MnDOT Baseline Status: Baselined
   f. A must finish by date that is after the last letting period

3.0 Negative Float
   a. P6 Project Status code: active projects
   b. MnDOT Project Status code: planned or programmed
   c. Schedule: Design or bridge
   d. MnDOT Completion Type code: MnDOT Let
   e. MnDOT Baseline Status Codes: Schedule Under Review, Baselined, Recovery
   f. A must finish by date that is after the last letting period Program Review Report

6.0 APPENDIX

The following information is further guidance, protocols, and reference materials for how to use reports in P6.

6.1 REPORTS LAYOUT DICTIONARY

The Reports Layout and Dictionary has been developed to detail out the columns/fields, filters, grouping and sorting information required to run reports if the layouts in P6 are not available. See RD-00-12_Reports Layouts Dictionary.xlsx